```
=> d his

     (FILE 'HOME' ENTERED AT 18:06:07 ON 28 AUG 2006)

     FILE 'EMBASE, MEDLINE, BIOSIS' ENTERED AT 18:06:27 ON 28 AUG 2006
L1            97 S KAVA AND CANCER
L2            79 DUP REM L1 (18 DUPLICATES REMOVED)
L3            36 S L2 NOT PY>2003
L4            22 S L2 NOT PY>2002
L5             0 S L4 AND BLADDER
L6             4 S L2 AND BLADDER
L7            29 S (HOP OR HOPS OR BEER) AND (BLADDER CANCER)
L8            14 DUP REM L7 (15 DUPLICATES REMOVED)
L9            11 S L8 NOT PY>2003
L10            0 S (HOP OR HOPS) AND (BLADDER CANCER)
L11          224 S (HOP OR HOPS) AND (CANCER)
L12            1 S L11 AND BLADDER
L13           15 S L11 AND URINARY
L14            7 DUP REM L13 (8 DUPLICATES REMOVED)
L15            5 S L14 NOT PY>2003
L16          111 S L11 NOT PY>2002
L17           64 DUP REM L16 (47 DUPLICATES REMOVED)
L18           64 S (HUMULUS(W)LUPULUS) AND CANCER
L19           43 DUP REM L18 (21 DUPLICATES REMOVED)
L20            0 S L19 AND (BLADDER OR URINARY)
L21           14 S L19 NOT PY>2002

     FILE 'CAPLUS' ENTERED AT 18:25:32 ON 28 AUG 2006
L22           38 S (HUMULUS(W)LUPULUS) AND CANCER
L23            1 S L22 AND (BLADDER OR URINARY)
L24           13 S L22 NOT PY>2003
L25          429 S PIPER(W)METHYSTICUM
L26            8 S L25 AND CANCER

     FILE 'REGISTRY' ENTERED AT 18:30:13 ON 28 AUG 2006
L27              STRUCTURE UPLOADED
L28            0 S L27 FAM SAM
L29            2 S L27 FAM FULL
L30              STRUCTURE UPLOADED
L31            1 S L30 FAM FULL

     FILE 'CAPLUS' ENTERED AT 18:32:14 ON 28 AUG 2006
L32            9 S L29
L33            9 S (VITEX(W)LEPTOBOTRYS) OR (GNAPHALIUM(W)MULTICEPS)
L34            0 S L33 AND CANCER
L35            0 S L33 AND CARCIN?
L36            1 S L31
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Connecting via Winsock to STN


Welcome to STN International!  Enter x:x

LOGINID:SSPTAEXO1623

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'EMBASE, MEDLINE, BIOSIS' AT 18:16:08 ON 28 AUG 2006
FILE 'EMBASE' ENTERED AT 18:16:08 ON 28 AUG 2006
Copyright (c) 2006 Elsevier B.V. All rights reserved.
FILE 'MEDLINE' ENTERED AT 18:16:08 ON 28 AUG 2006
FILE 'BIOSIS' ENTERED AT 18:16:08 ON 28 AUG 2006
Copyright (c) 2006 The Thomson Corporation

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    28.15      28.36

=> s (hop or hops or beer) and (bladder cancer)
L7          29 (HOP OR HOPS OR BEER) AND (BLADDER CANCER)

=> dup rem l7
PROCESSING COMPLETED FOR L7
L8          14 DUP REM L7 (15 DUPLICATES REMOVED)

=> s l8 not py>2003
L9          11 L8 NOT PY>2003

=> d l9 1-11 ti

L9   ANSWER 1 OF 11  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
TI   Alcohol drinking and bladder cancer.

L9   ANSWER 2 OF 11  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
TI   Some habits as risk factors for bladder cancer.

L9   ANSWER 3 OF 11  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
TI   Alcohol consumption and bladder cancer risk: Results
     from the Netherlands cohort study.

L9   ANSWER 4 OF 11  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
TI   Non-occupational risk factors for cancer of the lower urinary tract in
     Germany.

L9   ANSWER 5 OF 11  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
TI   Epidemiology of transitional cell carcinoma of the bladder: Profile of an
     urban population in the south-west of England.

L9   ANSWER 6 OF 11  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
TI   Life style and occupational risk factors for bladder
     cancer in Germany: A case-control study.

L9   ANSWER 7 OF 11  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
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reserved on STN
TI Bladder cancer and the consumption of alcoholic beverages in Spain.

L9 ANSWER 8 OF 11 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Bladder cancer and alcoholic beverage consumption.

L9 ANSWER 9 OF 11 MEDLINE on STN
TI [Etiology, pathogenesis and epidemiology or urothelial tumors]. Atiologie, Pathogenese und Epidemiologie von Urotheltumoren.

L9 ANSWER 10 OF 11 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Detection of the carcinogen 2-amino-1-methyl-6-phenylimidazo(4,5-b)pyridine (PhIP) in beer and wine.

L9 ANSWER 11 OF 11 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI CANCER RISK AMONG DANISH MALE SEVENTH-DAY-ADVENTISTS AND OTHER TEMPERANCE SOCIETY MEMBERS.

=> d l9 1 7 8 ti abs bib

L9 ANSWER 1 OF 11 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Alcohol drinking and bladder cancer.
AB The relation between alcoholic beverage consumption and bladder cancer risk was investigated using data from a case-control study conducted between 1985 and 1992 in two areas of northern Italy. Cases were 727 patients with incident, histologically confirmed bladder cancer, and controls 1,067 patients admitted to the same network of hospitals for acute, non-neoplastic, nonurologic, or genital tract diseases. Compared to nondrinkers, the odds ratio (OR) was 0.79 (95% confidence interval, CI, 0.58-1.08) for drinkers, and 0.84 (95%CI, 0.58-1.22) for ≥6 drinks/day. The OR was 0.86 (95%CI, 0.60-1.23) for ≥5 wine drinks/day, 0.69 for beer, and 0.85 for spirits. No trend was observed with duration (OR =1.00 for ≥40 years). ORs were consistent across various strata of covariates including age, sex, and smoking habits. Our study, based on a population with high alcohol (mainly wine) intake, found no association between bladder cancer risk and alcohol intake, even at high levels of consumption. Copyright .COPYRGT. 2002 Elsevier Science Inc.
AN 2002274641 EMBASE
TI Alcohol drinking and bladder cancer.
AU Pelucchi C.; Negri E.; Franceschi S.; Talamini R.; La Vecchia C.
CS C. Pelucchi, Istituto Ricerche Farmacologiche, Mari Negri, 20157 Milan, Italy. pelucchi@marionegri.it
SO Journal of Clinical Epidemiology, (2002) Vol. 55, No. 7, pp. 637-641. .
Refs: 29
ISSN: 0895-4356 CODEN: JCEPEE
PUI S 0895-4356(02)00397-9
CY United States
DT Journal; Article
FS 016 Cancer
017 Public Health, Social Medicine and Epidemiology
028 Urology and Nephrology
LA English
SL English
ED Entered STN: 29 Aug 2002
Last Updated on STN: 29 Aug 2002

L9 ANSWER 7 OF 11 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights

reserved on STN
TI Bladder cancer and the consumption of alcoholic beverages in Spain.
DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER
AN 88056607 EMBASE
DN 1988056607
TI Bladder cancer and the consumption of alcoholic beverages in Spain.
AU Bravo M.P.; Del Rey Calero J.; Conde M.
CS Department of Preventive Medicine, School of Medicine, Autonomous University of Madrid, 28029 Madrid, Spain
SO European Journal of Epidemiology, (1987) Vol. 3, No. 4, pp. 365-369. . ISSN: 0392-2990 CODEN: EJEPE8
CY Italy
DT Journal
FS 016 Cancer
017 Public Health, Social Medicine and Epidemiology
028 Urology and Nephrology
LA English
ED Entered STN: 11 Dec 1991
Last Updated on STN: 11 Dec 1991

L9 ANSWER 8 OF 11 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Bladder cancer and alcoholic beverage consumption.
AB A population-based case-control study of bladder cancer was conducted in 10 geographic areas in the United States. Risk of bladder cancer was not related to overall alcohol intake, nor to amounts of wine, beer, or spirits consumed. Alcohol also did not interact with known or suspected bladder carcinogens to increase risk, and no evidence was found that indirect mechanisms associated with alcohol ingestion increase the risk of bladder cancer.
AN 84004996 EMBASE
DN 1984004996
TI Bladder cancer and alcoholic beverage consumption.
AU Thomas D.B.; Uhl C.N.; Hartge P.
CS The Fred Hutchinson Cancer Research Center, Seattle, WA 98104, United States
SO American Journal of Epidemiology, (1983) Vol. 118, No. 5, pp. 720-727. . CODEN: AJEPAS
CY United States
DT Journal
FS 017 Public Health, Social Medicine and Epidemiology
016 Cancer
028 Urology and Nephrology
032 Psychiatry
052 Toxicology
LA English
ED Entered STN: 10 Dec 1991
Last Updated on STN: 10 Dec 1991

=> s (hop or hops) and (bladder cancer)
L10 0 (HOP OR HOPS) AND (BLADDER CANCER)

=> s (hop or hops) and (cancer)
L11 224 (HOP OR HOPS) AND (CANCER)

=> s l11 nad bladder
MISSING OPERATOR L11 NAD
The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

```
=> s l11 and bladder
L12          1 L11 AND BLADDER

=> d l12 1 ti abs bib

L12  ANSWER 1 OF 1  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
TI   Synthesis and in vitro anti-tumor activity of N-{1-[(3-thioxo-5,6-
     dihydroimidazo[2,1-c][1,2,4]thiadiazol-7-ylthio)thiocarbonyl]-2-
     imidazolidene}arylsulfonamides.
AB   A series of N-{1-[(3-thioxo-5,6-dihydroimidazo[2,1-c][1,2,4]thiadiazol-7-
     ylthio)thiocarbonyl]-2-imidazolidene}arylsulfonamides (2a-z) was obtained
     by reacting 6,7-dihydro-1H-imidazo[2,1-c][1,2,4]thiadiazol-3-thione (1)
     with arylsulfonyl chlorides.  The relationships between structure and
     anti-tumor activity revealed that compound 2o with p-Cl substituent at the
     phenyl ring was most active (-log GI50 > 8.00, -log TGI = 7.66) and was
     found to exhibit high selectivity toward the leukemia CCRF-CEM cell line
     (Delta(f) = 3.08 and 3.31, respectively). (c) 2006 Elsevier Ltd.  All
     rights reserved.
AN   2006:386060  BIOSIS
DN   PREV200600376087
TI   Synthesis and in vitro anti-tumor activity of N-{1-[(3-thioxo-5,6-
     dihydroimidazo[2,1-c][1,2,4]thiadiazol-7-ylthio)thiocarbonyl]-2-
     imidazolidene}arylsulfonamides.
AU   Saczewski, Jaroslaw; Brzozowski, Zdzialaw; Saczewski, Franciszek [Reprint
     Author]; Bednarski, Patrick J.; Liebeke, Manuel; Gdaniec, Maria
CS   Med Univ Gdansk, Dept Chem Technol Drugs, PL-80416 Gdansk, Poland
     saczew@amg.gda.pl
SO   Bioorganic & Medicinal Chemistry Letters, (JUL 15 2006) Vol. 16, No. 14,
     pp. 3663-3667.
     CODEN: BMCLE8. ISSN: 0960-894X.
DT   Article
LA   English
ED   Entered STN: 2 Aug 2006
     Last Updated on STN: 2 Aug 2006


=> s l11 and urinary
L13          15 L11 AND URINARY

=> dup rem l13
PROCESSING COMPLETED FOR L13
L14            7 DUP REM L13 (8 DUPLICATES REMOVED)

=> d l14 not py>2003
'NOT' IS NOT A VALID FORMAT
'PY>2003' IS NOT A VALID FORMAT
In a multifile environment, a format can only be used if it is valid
in at least one of the files.  Refer to file specific help messages
or the STNGUIDE file for information on formats available in
individual files.
REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ti

L14  ANSWER 1 OF 7  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN                                      DUPLICATE 1
TI   Similar uptake of lung carcinogens by smokers of regular, light, and
     ultralight cigarettes.


=> sl14 not py>2003
SL14 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
```

```
=> s l4 not py>2003
<------User Break------>

=> s l14 not py>2003
L15          5 L14 NOT PY>2003

=> d l15 1-5 ti

L15  ANSWER 1 OF 5  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
TI   Human urinary carcinogen metabolites: Biomarkers for
     investigating tobacco and cancer.

L15  ANSWER 2 OF 5  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
TI   High urinary hydroxyproline excretion in patients with advanced
     head and neck cancer.

L15  ANSWER 3 OF 5  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
TI   Comparison between CEA, TPA, CA 15/3 and hydroxyproline, alkaline
     phosphatase, whole body retention of 99mTc MDP in the follow-up of bone
     metastases in breast cancer.

L15  ANSWER 4 OF 5     MEDLINE on STN
TI   Urinary hydroxyproline levels in patients with prostatic
     carcinoma.

L15  ANSWER 5 OF 5  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
TI   Markers of bone turnover in patients with differentiated thyroid
     cancer with and following withdrawal of thyroxine suppressive
     therapy.


=> s l11 not py>2002
L16        111 L11 NOT PY>2002

=> dup rem l16
PROCESSING COMPLETED FOR L16
L17          64 DUP REM L16 (47 DUPLICATES REMOVED)

=> d l17 1-20 ti

L17  ANSWER 1 OF 64  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
TI   Synthesis and cytotoxic evaluation of some 4-anilinofuro[2,3-b]quinoline
     derivatives.

L17  ANSWER 2 OF 64  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
TI   Synthesis and cytotoxic evaluation of potential bis-intercalators:
     Tetramethylenebis(oxy)- and hexamethylenebis(oxy)-linked assemblies
     consisting of flavone, xanthone, anthraquinone, and dibenzofuran.

L17  ANSWER 3 OF 64  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
TI   Helicobacter pylori infection.

L17  ANSWER 4 OF 64     MEDLINE on STN                    DUPLICATE 1
TI   Cancer chemopreventive activity of Xanthohumol, a natural
     product derived from hop.

L17  ANSWER 5 OF 64     MEDLINE on STN                    DUPLICATE 2
TI   Synthesis and primary cytotoxicity evaluation of new 5-nitroindole-2,3-
     dione derivatives.
```

L17 ANSWER 6 OF 64 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 3
TI Human urinary carcinogen metabolites: Biomarkers for investigating tobacco and cancer.

L17 ANSWER 7 OF 64 MEDLINE on STN DUPLICATE 4
TI Comparative chemical attributes of native North American hop, Humulus lupulus var. lupuloides E. Small.

L17 ANSWER 8 OF 64 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Isolation and potential cancer chemopreventive activities of phenolic compounds of beer.

L17 ANSWER 9 OF 64 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Small glutamine-rich protein/viral protein U-binding protein is a novel cochaperone that affects heat shock protein 70 activity.

L17 ANSWER 10 OF 64 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 5
TI Inhibitory effect of herbal remedies on 12-o-tetradecanoylphorbol-13-acetate-promoted Epstein-Barr virus early antigen activation.

L17 ANSWER 11 OF 64 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI 8-Prenylnaringenin, the phytooestrogen in hops and beer, may influence the incidence of breast cancer.

L17 ANSWER 12 OF 64 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Co-chaperones Bag-1, Hop and Hsp40 regulate Hsc70 and Hsp90 interactions with wild-type or mutant p53.

L17 ANSWER 13 OF 64 MEDLINE on STN DUPLICATE 6
TI Evaluation of estrogenic activity of plant extracts for the potential treatment of menopausal symptoms.

L17 ANSWER 14 OF 64 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Tumour enhancement with newly developed Mn-metalloporphyrin (HOP -9P) in magnetic resonance imaging of mice.

L17 ANSWER 15 OF 64 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 7
TI Synthesis and antitumor evaluation of 6-thioxo-, 6-oxo- and 2,4-dioxopyrimidine derivatives.

L17 ANSWER 16 OF 64 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 8
TI 8-prenylnaringenin, the phytoestrogen in hops and beer, upregulates the function of the E-cadherin/catenin complex in human mammary carcinoma cells.

L17 ANSWER 17 OF 64 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 9
TI Synthesis of certain diarylsulfonylureas as antitumor agents.

L17 ANSWER 18 OF 64 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 10
TI In vitro glucuronidation of xanthohumol, a flavonoid in hop and beer, by rat and human liver microsomes.

L17 ANSWER 19 OF 64 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights

reserved on STN DUPLICATE 11
TI In vitro biotransformation of xanthohumol, a flavonoid from hops (Humulus lupulus), by rat liver microsomes.

L17 ANSWER 20 OF 64 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Inhibition of angiogenesis by humulone, a bitter acid from beer hop.

=> d l17 7 8 11 ti abs bib

L17 ANSWER 7 OF 64 MEDLINE on STN DUPLICATE 4
TI Comparative chemical attributes of native North American hop, Humulus lupulus var. lupuloides E. Small.
AB The genetic diversity of 159 representative genotypes of native hop (Humulus lupulus var. lupuloides E. Small, Cannabaceae) from 34 selected populations was assessed by relative magnitudes and ranges of alpha acids (AA), beta acids (BA), and the cohumulone (CoH) component of alpha acids, with reference to temporal changes between 1989-1990 and 2001, and to the same attributes in American and European hop cultivars, principally H. lupulus var. lupulus L. Chemical profiles of these genotypes were generated by high pressure liquid chromatography (HPLC) of methanol extracts from their processed samples (cones). The alpha ratio (AR, alpha acids / alpha+beta acids) measured the degree to which alpha acids predominated in cone extracts. Synchronous ranges of AR and CoH were also selected for graphic portrayals of native hop genotypic diversity. Cones sampled and analyzed from eight populations that were accessible in both 1989 and 2001 were distinct in chemical attributes, indicating a succession of genotypes, and suggesting temporal cycling of H. lupulus var.lupuloides germplasm. The principal distinctions between the two sub-species were a markedly higher proportion of CoH (38-88% vs. 19-41%) in alpha acids of H. l. var. lupuloides, and generally higher concentrations of AA in cultivars of both American and European commercial hop cultivars, predominantly H. lupulus var. lupulus. All of the 159 native hop genotypes also contained detectable levels of xanthohumol and xanthogalenol, prenylflavonoids recently reported to have mammalian anti-cancer activity. Some native genotypes had previously exhibited natural repellence of insect and mite pests; thus H. lupulus var. lupuloides germplasm offers a diverse resource of underutilized and yet undefined biochemicals.
AN 2002693471 MEDLINE
DN PubMed ID: 12453579
TI Comparative chemical attributes of native North American hop, Humulus lupulus var. lupuloides E. Small.
AU Hampton Richard; Nickerson Gail; Whitney Peggy; Haunold Alfred
CS Department of Environmental and Molecular Toxicology, Oregon State University, Corvallis, OR 97331, USA.. hamporc@fmtc.com
SO Phytochemistry, (2002 Dec) Vol. 61, No. 7, pp. 855-62.
Journal code: 0151434. ISSN: 0031-9422.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200304
ED Entered STN: 14 Dec 2002
Last Updated on STN: 10 Apr 2003
Entered Medline: 9 Apr 2003

L17 ANSWER 8 OF 64 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Isolation and potential cancer chemopreventive activities of phenolic compounds of beer.
AB Beer contains a variety of phenolic compounds. During the brewing

process, some of these compounds are removed by polyvinylpolypyrrolidone (PVPP) to prevent haze formation. We have analyzed the phytochemical composition of a PVPP residue as well as of unstabilized beer and isolated a total of 51 compounds. Eight structures were identified as novel, i.e., 2-(4'-hydroxyphenyl)-3,5- dihydroxybenzoic acid (6), 2'-(4"-hydroxyphenyl)-isoferulic acid ester (12), 1,2,5,7-tetrahydroxyanthraquinone (23) and 4,7-dihydroxy-5- (2',4',6'-trihydroxyphenyl)-indan-1,2-dione (24) from the PVPP residue, and catechin-7-O-β-(6"-O-nicotinoyl)-β-D- glucopyranoside (41), ent-epigallo-catechin-(4α →8, 2α →O→7)catechin (44), ent-epigallocatechin (4α →6, 2α →O→7)catechin (45) and 2,3-cis-3,4-trans-2-[2,3-trans-3,3', 4',5,7-pentahydroxyflavan-8-yl]-4-(3,4-dihydroxyphenyl)3,5, 7-trihydroxybenzopyran (46) from the unstabilized beer. Most of the compounds were tested for potential cancer chemopreventive activities in in vitro test systems detecting a modulation of carcinogen metabolism (inhibition of phase 1 cytochrome P450 1A (Cyp1A) activity, induction of NAD(P)H:quinone oxidoreductase (QR) activity) and anti-inflammatory mechanisms (inhibition of lipopolysaccharide (LPS)-mediated induction of inducible nitric oxide synthase (iNOS), inhibition of cyclooxygenase 1 (Cox-1) activity). 1,2,5,7- Tetrahydroxyanthraquinone (23) and xanthohumol (25), a prenylated chalcone derived from hop, were identified as the most potent compounds and were additionally tested for inhibition of chemically-induced preneoplastic lesions in an ex vivo mouse mammary gland organ culture model (MMOC). Importantly, both agents inhibited lesion formation with halfmaximal inhibitory concentrations (IC(50)) of 0.1 and 0.02 μM, respectively. Our results demonstrate that beer is an interesting source of potential cancer chemopreventive agents and should be further investigated with this respect.

AN 2005449849 EMBASE
TI Isolation and potential cancer chemopreventive activities of phenolic compounds of beer.
AU Gerhauser C.; Alt A.P.; Klimo K.; Knauft J.; Frank N.; Becker H.
CS C. Gerhauser, Deutsches Krebsforschungszentrum (DKFZ), Abteilung Toxikologie und Krebsrisikofaktoren, Im Neuenheimer Feld 280, 69120 Heidelberg, Germany. c.gerhauser@dkfz.de
SO Phytochemistry Reviews, (2002) Vol. 1, No. 3, pp. 369-377. .
Refs: 14
ISSN: 1568-7767 CODEN: PRHEBS
CY Netherlands
DT Journal; Conference Article
FS 016 Cancer
030 Pharmacology
037 Drug Literature Index
LA English
SL English
ED Entered STN: 1 Dec 2005
Last Updated on STN: 1 Dec 2005

L17 ANSWER 11 OF 64 BIOSIS
TI 8-Prenylnaringenin, the phytooestrogen in hops and beer, may influence the incidence of breast cancer.
AN 2004:84479 BIOSIS
DN PREV200400084317
TI 8-Prenylnaringenin, the phytooestrogen in hops and beer, may influence the incidence of breast cancer.
AU Depypere, H.; Rong, H.; Boterberg, T.; Serreyn, R.; Stove, Ch.; Van Slambrouck, S.; De Keukeleire, D.; Mareel, M.; Bracke, M.
SO European Journal of Cancer, (November 2002) Vol. 38, No. Supplement 6, pp. S91. print.
Meeting Info.: 3rd Biennial International Meeting of the Flemish

Gynaecological Oncology Group: Endocrine Treatment and Prevention of Breast and Gynaecological Cancers. Brussels, Belgium. December, 2001. Flemish Gynaecological Oncology Group.
ISSN: 0959-8049 (ISSN print).
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 11 Feb 2004
Last Updated on STN: 11 Feb 2004

=> s (humulus(w)lupulus) and cancer
L18 64 (HUMULUS(W) LUPULUS) AND CANCER

=> dup rem l18
PROCESSING COMPLETED FOR L18
L19 43 DUP REM L18 (21 DUPLICATES REMOVED)

=> s l19 and (bladder or urinary)
L20 0 L19 AND (BLADDER OR URINARY)

=> s l19 not py>2002
L21 14 L19 NOT PY>2002

=> d l21 1-14 ti

L21 ANSWER 1 OF 14 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Anticancer and antithrombin activity of Russian plants.

L21 ANSWER 2 OF 14 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI In vitro biotransformation of xanthohumol, a flavonoid from hops (Humulus lupulus), by rat liver microsomes.

L21 ANSWER 3 OF 14 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI In vitro inhibition of human P450 enzymes by prenylated flavonoids from hops, Humulus lupulus.

L21 ANSWER 4 OF 14 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Prenylated chalcones and flavanones as inducers of quinone reductase in mouse Hepa 1c1c7 cells.

L21 ANSWER 5 OF 14 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Antiproliferative and cytotoxic effects of prenylated flavonoids from hops (Humulus lupulus) in human cancer cell lines.

L21 ANSWER 6 OF 14 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI Humulon, a bitter in the hop, inhibits tumor promotion by 12-O-tetradecanoylphorbol-13-acetate in two-stage carcinogenesis in mouse skin.

L21 ANSWER 7 OF 14 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI New treatments from plants.

L21 ANSWER 8 OF 14 MEDLINE on STN
TI Comparative chemical attributes of native North American hop,

Humulus lupulus var. lupuloides E. Small.

L21 ANSWER 9 OF 14 MEDLINE on STN
TI Evaluation of estrogenic activity of plant extracts for the potential treatment of menopausal symptoms.

L21 ANSWER 10 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Cancer chemopreventive activity of Xanthohumol, a natural product derived from hop.

L21 ANSWER 11 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI 8-Prenylnaringenin, the phytoestrogen in hops and beer, upregulates the function of the E-cadherin/catenin complex in human mammary carcinoma cells.

L21 ANSWER 12 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Xanthohumol from hop (Humulus lupulus) as a novel potential cancer chemopreventive agent.

L21 ANSWER 13 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Anti-proliferative mechanisms of Xanthohumol from hop (Humulus lupulus) in in vitro breast cancer chemoprevention models.

L21 ANSWER 14 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI In vitro glucuronidation of xanthohumol, a flavonoid in hop and beer, by rat and human liver microsomes.

=> d l21 3 4 5 ti abs bib

L21 ANSWER 3 OF 14 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
TI In vitro inhibition of human P450 enzymes by prenylated flavonoids from hops, Humulus lupulus.
AB 1. Several unique flavonoid compounds have recently been isolated from hops, Humulus lupulus, and their presence has been detected in beer. Their chemical structures are similar to other plant-derived compounds, many present in the human diet, that have been shown to have cancer chemopreventive properties due, in part, to inhibition of cytochrome P450 enzymes that activate carcinogens. Additionally, preliminary studies have shown these flavonoids (at 100 μM) to be inhibitory of P450-mediated activation reactions in a variety of in vitro systems. Thus, the in vitro effects of these phytochemicals on cDNA-expressed human CYP1A1, CYP1B1, CYP1A2, CYP3A4 and CYP2E1 were currently examined by the use of diagnostic substrates and the carcinogen AFB1. 2. At 10 μM, the prenylated chalcone, xanthohumol (XN), almost completely inhibited the 7-ethoxyresorufin O-deethylase (EROD) activity of CYP1A1. At the same concentration, other hop flavonoids decreased the EROD activity by 90.8-27.0%. 3. At 10 μM, XN completely eliminated CYP1B1 EROD activity, whereas the other hop flavonoids showed varying degrees of inhibitory action ranging from 99.3 to 1.8%. 4. In contrast, the most effective inhibitors of CYP1A2 acetanilide 4-hydroxylase activity were the two prenylated flavonoids, 8-prenylnaringenin (8PN) and isoxanthohumol (IX), which produced > 90% inhibition when added at concentrations of 10 μM. 5. CYP1A2 metabolism of the carcinogen AFB1 was also inhibited by IX and 8PN as shown by decreased appearance of dihydrodiols and AFM1 as analysed by hplc. IX and 8PN also decreased covalent binding of radiolabelled AFB1 to microsomal protein in a

concomitant manner. 6. XN, IX and 8PN, however, were poor inhibitors of CYP2E1 and CYP3A4 as measured by their effect on chorzoxazone hydroxylase and nifedipine oxidase activities respectively. 7. These results suggest that the hop flavonoids are potent and selective inhibitors of human cytochrome P450 and warrant further in vivo investigations.

AN 2000119199 EMBASE

TI In vitro inhibition of human P450 enzymes by prenylated flavonoids from hops, Humulus lupulus.

AU Henderson M.C.; Miranda C.L.; Stevens J.F.; Deinzer M.L.; Buhler D.R.

CS D.R. Buhler, Dept. of Environ./Molec. Toxicol., Oregon State University, Corvallis, OR 97331, United States. Donald.Buhler@orst.edu

SO Xenobiotica, (2000) Vol. 30, No. 3, pp. 235-251. .
Refs: 44
ISSN: 0049-8254 CODEN: XENOBH

CY United Kingdom

DT Journal; Article

FS 029 Clinical Biochemistry

LA English

SL English

ED Entered STN: 21 Apr 2000
Last Updated on STN: 21 Apr 2000

L21 ANSWER 4 OF 14 EMBASE

TI Prenylated chalcones and flavanones as inducers of quinone reductase in mouse Hepa 1c1c7 cells.

AB The objective of this study was to determine if prenylchalcones (open C-ring flavonoids) and prenylflavanones from hops and beer are inducers of quinone reductase (QR) in the mouse hepatoma Hepa 1c1c7 cell line. All the prenylchalcones and prenylflavanones tested were found to induce QR but not CYP1A1 in this cell line. In contrast, the synthetic chalcone, chalconaringenin, and the flavanone, naringenin, with no prenyl or geranyl groups, were ineffective in inducing QR. The hop chalcones, xanthohumol and dehydrocycloxanthohumol hydrate, also induced QR in the Ah-receptor-defective mutant cell line, Hepa 1c1c7 bp(r)c1. Thus, the prenylflavonoids represent a new class of monofunctional inducers of QR.

AN 2000068349 EMBASE

TI Prenylated chalcones and flavanones as inducers of quinone reductase in mouse Hepa 1c1c7 cells.

AU Miranda C.L.; Aponso G.L.M.; Stevens J.F.; Deinzer M.L.; Buhler D.R.

CS D.R. Buhler, Dept. of Environ./Molecular Toxicol., Oregon State University, Corvallis, OR 97331, United States. donald.buhler@orst.edu

SO Cancer Letters, (2000) Vol. 149, No. 1-2, pp. 21-29. .
Refs: 36
ISSN: 0304-3835 CODEN: CALEDQ

PUI S 0304-3835(99)00328-6

CY Ireland

DT Journal; Article

FS 016 Cancer
037 Drug Literature Index

LA English

SL English

ED Entered STN: 2 Mar 2000
Last Updated on STN: 2 Mar 2000

L21 ANSWER 5 OF 14 EMBASE

TI Antiproliferative and cytotoxic effects of prenylated flavonoids from hops (Humulus lupulus) in human cancer cell lines.

AB Six flavonoids [xanthohumol (XN), 2',4',6',4-tetrahydroxy-3'-prenylchalcone (TP); 2',4',6',4-tetrahydroxy-3'-geranylchalcone (TG); dehydrocycloxanthohumol (DX); dehydrocycloxanthohumol hydrate (DH); and

isoxanthohumol (IX)] from hops (Humulus lupulus) were tested for their antiproliferative activity in human breast cancer (MCF-7), colon cancer (HT-29) and ovarian cancer (A-2780) cells in vitro. XN, DX and IX caused a dose-dependent (0.1 to 100 μM) decrease in growth of all cancer cells. After a 2-day treatment, the concentrations at which the growth of MCF-7 cells was inhibited by 50% (IC50) were 13.3, 15.7 and 15.3 μM for XN, DX and IX, respectively. After a 4-day treatment, the IC50 for XN, DX and IX were 3.47, 6.87 and 4.69 μM, respectively. HT-29 cells were more resistant than MCF-7 cells to these flavonoids. In A-2780 cells, XN was highly antiproliferative with IC50 values of 0.52 and 5.2 μM after 2 and 4 days of exposure, respectively. At 100 μM, all the hop flavonoids were cytotoxic in the three cell lines. Growth inhibition of XN- and IX-treated MCF-7 cells was confirmed by cell counting. XN and IX inhibited DNA synthesis in MCF-7 cells. As antiproliferative agents, XN (chalcone) and IX (flavanone isomer of XN) may have potential chemopreventive activity against breast and ovarian cancer in humans.

AN 1999252011 EMBASE

TI Antiproliferative and cytotoxic effects of prenylated flavonoids from hops (Humulus lupulus) in human cancer cell lines.

AU Miranda C.L.; Stevens J.F.; Helmrich A.; Henderson M.C.; Rodriguez R.J.; Yang Y.-H.; Deinzer M.L.; Barnes D.W.; Buhler D.R.

CS D.R. Buhler, Dept. Environmental Mol. Toxicology, Oregon State University, Corvallis, OR 97331, United States

SO Food and Chemical Toxicology, (1999) Vol. 37, No. 4, pp. 271-285. .
Refs: 32
ISSN: 0278-6915 CODEN: FCTOD7

PUI S 0278-6915(99)00019-8

CY United Kingdom

DT Journal; Article

FS 016 Cancer
030 Pharmacology
052 Toxicology

LA English

SL English

ED Entered STN: 5 Aug 1999
Last Updated on STN: 5 Aug 1999

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	67.89	68.10

FILE 'CAPLUS' ENTERED AT 18:25:32 ON 28 AUG 2006

FILE COVERS 1907 - 28 Aug 2006 VOL 145 ISS 10
FILE LAST UPDATED: 27 Aug 2006 (20060827/ED)

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http://www.cas.org/infopolicy.html

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=> s (humulus(w)lupulus) and cancer
          1555 HUMULUS
           845 LUPULUS
           813 HUMULUS(W)LUPULUS
        289095 CANCER
L22          38 (HUMULUS(W)LUPULUS) AND CANCER

=> s l22 and (bladder or urinary)
         34264 BLADDER
        125186 URINARY
L23           1 L22 AND (BLADDER OR URINARY)

=> d l23

L23  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2003:133809  CAPLUS
DN   138:163525
TI   Anti-cancer agents and method of use thereof
IN   Chen, Sophie
PA   USA
SO   U.S. Pat. Appl. Publ., 26 pp., which
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
PI   US 2003035851         A1    20030220    US 2002-72823           20020208
PRAI US 2001-267331P       P     20010208
     US 2001-308213P       P     20010727
OS   MARPAT 138:163525


=> s l22 not py>2003
       3180568 PY>2003
L24          13 L22 NOT PY>2003

=> d l24 1-13 ti

L24  ANSWER 1 OF 13  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Use of a new xanthohumol-rich hop product in the brewhouse-fate of
     xanthohumol during beer production and influence of non specific hop
     compounds on the bitterness of beer

L24  ANSWER 2 OF 13  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Preparation of amides consisting of indolyl carboxylic acids and
     monocyclic primary amines derived from naturally occurring ketones, and
     their skin depigmentation-related activities

L24  ANSWER 3 OF 13  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Phytoestrogens in botanical dietary supplements: implications for
     cancer

L24  ANSWER 4 OF 13  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Anti-cancer agents and method of use thereof

L24  ANSWER 5 OF 13  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Cancer chemopreventive activity of Xanthohumol, a natural
```

product derived from Hop

L24 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
TI Comparative chemical attributes of native North American hop, Humulus lupulus var. lupuloides E. Small

L24 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
TI Analysis of true chalcone synthase from Humulus lupulus L. and biotechnology aspects of medicinal hops

L24 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
TI Evaluation of Estrogenic Activity of Plant Extracts for the Potential Treatment of Menopausal Symptoms

L24 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
TI In vitro glucuronidation of xanthohumol, a flavonoid in hop and beer, by rat and human liver microsomes

L24 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
TI In vitro biotransformation of xanthohumol, a flavonoid from hops (Humulus lupulus), by rat liver microsomes

L24 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
TI In vitro inhibition of human P450 enzymes by prenylated flavonoids from hops, Humulus lupulus

L24 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
TI Antiproliferative and cytotoxic effects of prenylated flavonoids from hops (Humulus lupulus) in human cancer cell lines

L24 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
TI Estrogen and progestin bioactivity of foods, herbs, and spices

=> d l24 3 11 12 ti abs bib

L24 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
TI Phytoestrogens in botanical dietary supplements: implications for cancer
AB A review. Phytoestrogens are plant constituents that possess either estrogenic or antiestrogenic activity. Although their activities are weak as compared with human endogenous estrogens, the consumption of phytoestrogens may have clin. significant consequences. A number of botanicals, or the compds. contained therein, have been identified as putative estrogenic agents, but consensus in the biomedical community has been hampered by conflicting data from various in vitro and in vivo models of estrogenic activity. Phytoestrogens may serve as chemopreventive agents while at the same time being capable of promoting growth in estrogen receptor pos. cancer cell lines. Furthermore, they may exert their estrogenic influence through receptor-dependent and/or receptor-independent mechanisms. These findings have led to speculation that phytoestrogen intake might be ill advised for patients at an increased risk for hormone-dependent cancers, cancer patients, or cancer survivors. This article will attempt to sort out discrepancies between various exptl. models and establish whether certain herbs possess estrogenic activity. The review will focus on 5 popular botanical dietary supplements: Trifolium pratense (red clover), Cimicifuga racemosa (black cohosh), Humulus lupulus (hops), Angelica sinensis (dong quai), and Glycyrrhiza glabra (licorice). It will address their mechanisms of action, clin. evidence bases, and implications for use in cancer.
AN 2003:505980 CAPLUS
DN 139:390470
TI Phytoestrogens in botanical dietary supplements: implications for

cancer
AU Piersen, Colleen E.
CS UIC/NIH Center for Botanical Dietary Supplements Research in the Program for Collaborative Research in the Pharmaceutical Sciences, College of Pharmacy, University of Illinois at Chicago, USA
SO Integrative Cancer Therapies (2003), 2(2), 120-138
CODEN: ICTNAY; ISSN: 1534-7354
PB Sage Publications
DT Journal; General Review
LA English
RE.CNT 190 THERE ARE 190 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
TI In vitro inhibition of human P450 enzymes by prenylated flavonoids from hops, Humulus lupulus
AB 1. Several unique flavonoid compds. have recently been isolated from hops, Humulus lupulus, and their presence has been detected in beer. Their chemical structures are similar to other plant-derived compds., many present in the human diet, that have been shown to have cancer chemopreventive properties due, in part, to inhibition of cytochrome P 450 enzymes that activate carcinogens. Addnl., preliminary studies have shown these flavonoids (at 100 μM) to be inhibitory of P 450-mediated activation reactions in a variety of in vitro systems. Thus, the in vitro effects of these phytochems. on cDNA-expressed human CYP1A1, CYP1B1, CYP1A2, CYP3A4 and CYP2E1 were currently examined by the use of diagnostic substrates and the carcinogen AFB1. 2. At 10 μM, the prenylated chalcone, xanthohumol (XN), almost completely inhibited the 7-ethoxyresorufin O-deethylase (EROD) activity of CYP1A1. At the same concentration, other hop flavonoids decreased the EROD activity by 90.8-27.0%. 3. At 10 μM, XN completely eliminated CYP1B1 EROD activity, whereas the other hop flavonoids showed varying degrees of inhibitory action ranging from 99.3 to 1.8%. 4. In contrast, the most effective inhibitors of CYP1A2 acetanilide 4-hydroxylase activity were the two prenylated flavonoids, 8-prenylnaringenin (8PN) and isoxanthohumol (IX), which produced > 90% inhibition when added at concns. of 10 μM. 5. CYP1A2 metabolism of the carcinogen AFB1 was also inhibited by IX and 8PN as shown by decreased appearance of dihydrodiols and AFM1 as analyzed by hplc. IX and 8PN also decreased covalent binding of radiolabeled AFB1 to microsomal protein in a concomitant manner. 6. XN, IX and 8PN, however, were poor inhibitors of CYP2E1 and CYP3A4 as measured by their effect on chorzoxazone hydroxylase and nifedipine oxidase activities resp. 7. These results suggest that the hop flavonoids are potent and selective inhibitors of human cytochrome P 450 and warrant further in vivo investigations.
AN 2000:367565 CAPLUS
DN 133:144880
TI In vitro inhibition of human P450 enzymes by prenylated flavonoids from hops, Humulus lupulus
AU Henderson, M. C.; Miranda, C. L.; Stevens, J. F.; Deinzer, M. L.; Buhler, D. R.
CS Departments of Environmental and Molecular Toxicology, Oregon State University, Corvallis, OR, 97331, USA
SO Xenobiotica (2000), 30(3), 235-251
CODEN: XENOBH; ISSN: 0049-8254
PB Taylor & Francis Ltd.
DT Journal
LA English
RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
TI Antiproliferative and cytotoxic effects of prenylated flavonoids from hops (Humulus lupulus) in human cancer cell lines

AB Six flavonoids [xanthohumol (XN), 2',4',6',4-tetrahydroxy-3'-prenylchalcone (TP); 2',4',6',4-tetrahydroxy-3'-geranylchalcone (TG); dehydrocycloxanthohumol (DX); dehydrocycloxanthohumol hydrate (DH); and isoxanthohumol (IX)] from hops (H. lupulus) were tested for their antiproliferative activity in human breast cancer (MCF-7), colon cancer (HT-29), and ovarian cancer (A-2780) cells in vitro. XN, DX, and IX caused a dose-dependent (0.1-100 μM) decrease in the growth of all cancer cells. After a 2-day treatment, the concns. at which the growth of MCF-7 cells was inhibited by 50% (IC50) were 13.3, 15.7, and 15.3 μM for XN, DX, and IX, resp. After a 4-day treatment, the IC50 for XN, DX, and IX were 3.47, 6.87, and 4.69 μM, resp. HT-29 cells were more resistant than MCF-7 cells to these flavonoids. In A-2780 cells, XN was highly antiproliferative with IC50 values of 0.52 and 5.2 μM after 2 and 4 days of exposure, resp. At 100 μM, all the hop flavonoids were cytotoxic in the 3 cell lines. Growth inhibition of XN- and IX-treated MCF-7 cells was confirmed by cell counting. XN and IX inhibited DNA synthesis in MCF-7 cells. As antiproliferative agents, XN (chalcone) and IX (flavanone isomer of XN) may have potential chemopreventive activity against breast and ovarian cancer in humans.
AN 1999:429481 CAPLUS
DN 131:208684
TI Antiproliferative and cytotoxic effects of prenylated flavonoids from hops (Humulus lupulus) in human cancer cell lines
AU Miranda, C. L.; Stevens, J. F.; Helmrich, A.; Henderson, M. C.; Rodriguez, R. J.; Yang, Y.-H.; Deinzer, M. L.; Barnes, D. W.; Buhler, D. R.
CS Department of Environmental and Molecular Toxicology, Oregon State University, Corvallis, OR, 97331, USA
SO Food and Chemical Toxicology (1999), 37(4), 271-281
CODEN: FCTOD7; ISSN: 0278-6915
PB Elsevier Science Ltd.
DT Journal
LA English

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=> s Piper(w)methysticum
          3424 PIPER
           448 METHYSTICUM
L25         429 PIPER(W)METHYSTICUM

=> s l25 and cancer
        289095 CANCER
L26           8 L25 AND CANCER

=> d l26 1-8 ti

L26  ANSWER 1 OF 8  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Herb-drug interactions: a literature review

L26  ANSWER 2 OF 8  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Flavokawain A, a Novel Chalcone from Kava Extract, Induces Apoptosis in
     Bladder Cancer Cells by Involvement of Bax Protein-Dependent and
     Mitochondria-Dependent Apoptotic Pathway and Suppresses Tumor Growth in
     Mice

L26  ANSWER 3 OF 8  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Herbal remedies in the United States: potential adverse interactions with
     anticancer agents

L26  ANSWER 4 OF 8  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Isolation and synthesis of TNF-α release inhibitors from Fijian kawa
     (Piper methysticum)

L26  ANSWER 5 OF 8  CAPLUS  COPYRIGHT 2006 ACS on STN
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TI Inhibitory effect of herbal remedies on 12-o-tetradecanoylphorbol-13-acetate-promoted Epstein-Barr virus early antigen activation

L26 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
TI α-Pyrone compositions and method for the chemoprevention of cancer

L26 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
TI Two stages of cancer prevention with green tea

L26 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
TI Kava Root

=> d l26 2 ti abs bib

L26 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
TI Flavokawain A, a Novel Chalcone from Kava Extract, Induces Apoptosis in Bladder Cancer Cells by Involvement of Bax Protein-Dependent and Mitochondria-Dependent Apoptotic Pathway and Suppresses Tumor Growth in Mice
AB Consumption of the traditional kava preparation was reported to correlate with low and uncustomary gender ratios (more cancer in women than men) of cancer incidences in three kava-drinking countries: Fiji, Vanuatu, and Western Samoa. We have identified flavokawain A, B, and C but not the major kavalactone, kawain, in kava exts. as causing strong antiproliferative and apoptotic effect in human bladder cancer cells. Flavokawain A results in a significant loss of mitochondrial membrane potential and release of cytochrome c into the cytosol in an invasive bladder cancer cell line T24. These effects of flavokawain A are accompanied by a time-dependent decrease in Bcl-xL, a decrease in the association of Bcl-xL to Bax, and an increase in the active form of Bax protein. Using the primary mouse embryo fibroblasts Bax knockout and wild-type cells as well as a Bax inhibitor peptide derived from the Bax-binding domain of Ku70, we showed that Bax protein was, at least in part, required for the apoptotic effect of flavokawain A. In addition, flavokawain A down-regulates the expression of X-linked inhibitor of apoptosis and survivin. Because both X-linked inhibitor of apoptosis and survivin are main factors for apoptosis resistance and are overexpressed in bladder tumors, our data suggest that flavokawain A may have a dual efficacy in induction of apoptosis preferentially in bladder tumors. Finally, the anticarcinogenic effect of flavokawain A was evident in its inhibitory growth of bladder tumor cells in a nude mice model (57% of inhibition) and in soft agar.
AN 2005:328854 CAPLUS
DN 142:475540
TI Flavokawain A, a Novel Chalcone from Kava Extract, Induces Apoptosis in Bladder Cancer Cells by Involvement of Bax Protein-Dependent and Mitochondria-Dependent Apoptotic Pathway and Suppresses Tumor Growth in Mice
AU Zi, Xiaolin; Simoneau, Anne R.
CS Department of Urology and Chao Family Comprehensive Cancer Center, University of California, Irvine, Orange, CA, USA
SO Cancer Research (2005), 65(8), 3479-3486
CODEN: CNREA8; ISSN: 0008-5472
PB American Association for Cancer Research
DT Journal
LA English
RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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COST IN U.S. DOLLARS SINCE FILE TOTAL

	ENTRY	SESSION
FULL ESTIMATED COST	40.26	108.36

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-3.00	-3.00

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DICTIONARY FILE UPDATES: 27 AUG 2006 HIGHEST RN 904741-41-9

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http://www.cas.org/ONLINE/UG/regprops.html

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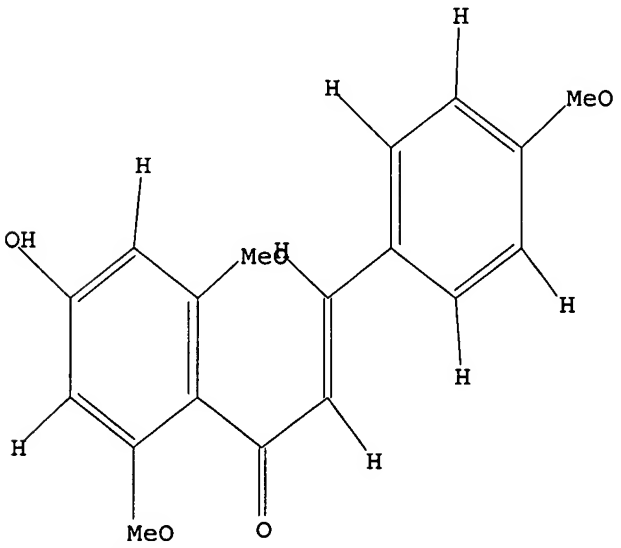
L27 STR



G1 OH,MeO

G2 H

Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED - 33 TO ITERATE

100.0% PROCESSED 33 ITERATIONS 0 ANSWERS
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BATCH **COMPLETE**
PROJECTED ITERATIONS: 316 TO 1004
PROJECTED ANSWERS: 0 TO 0

L28 0 SEA FAM SAM L27

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100.0% PROCESSED 612 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

L29 2 SEA FAM FUL L27

=> d l29 1-2

L29 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN
RN 320378-13-0 REGISTRY
ED Entered STN: 06 Feb 2001
CN 2-Propen-1-one, 1-(4-hydroxy-2,6-dimethoxyphenyl)-3-(4-methoxyphenyl)-, (2E)- (9CI) (CA INDEX NAME)
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LC STN Files: CA, CAPLUS, CASREACT

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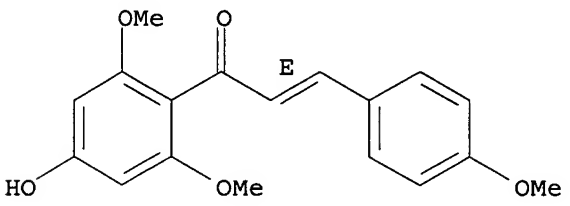

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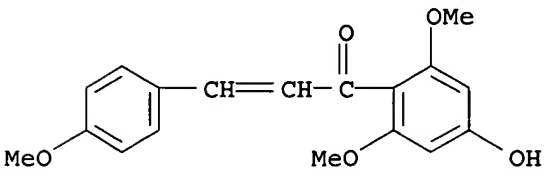
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L29 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN
RN 52077-39-1 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Propen-1-one, 1-(4-hydroxy-2,6-dimethoxyphenyl)-3-(4-methoxyphenyl)-(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Chalcone, 4'-hydroxy-2',4,6'-trimethoxy- (4CI)
OTHER NAMES:

CN 4'-Hydroxy-2',4,6'-trimethoxychalcone
FS 3D CONCORD
MF C18 H18 O5
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER, USPATFULL
    (*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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L30 STRUCTURE UPLOADED

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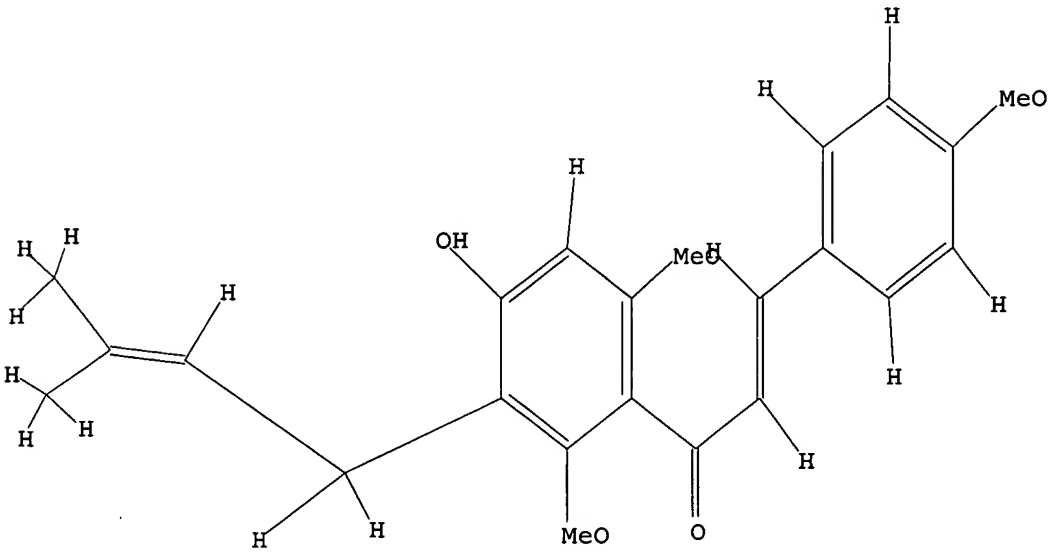
L30 HAS NO ANSWERS
L30 STR



G1 OH,MeO
G2 H

Structure attributes must be viewed using STN Express query preparation.

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FULL SCREEN SEARCH COMPLETED - 46 TO ITERATE

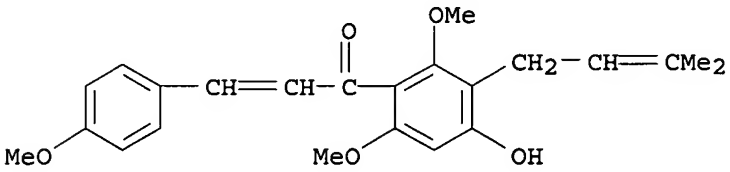
100.0% PROCESSED 46 ITERATIONS 1 ANSWERS

SEARCH TIME: 00.00.01

L31 1 SEA FAM FUL L30

=> d l31

L31 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN
RN 811419-23-5 REGISTRY
ED Entered STN: 11 Jan 2005
CN 2-Propen-1-one, 1-[4-hydroxy-2,6-dimethoxy-3-(3-methyl-2-butenyl)phenyl]-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C23 H26 O5
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	137.52	245.88

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-3.00

FILE 'CAPLUS' ENTERED AT 18:32:14 ON 28 AUG 2006
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FILE COVERS 1907 - 28 Aug 2006 VOL 145 ISS 10
FILE LAST UPDATED: 27 Aug 2006 (20060827/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

http://www.cas.org/infopolicy.html

```
=> s l29
L32          9 L29

=> d l32 1-9 ti

L32  ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Chalcone and flavone compounds for the treatment of bladder and urinary
     tract cancers

L32  ANSWER 2 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   A facile synthetic route to two chalcones

L32  ANSWER 3 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   A facile synthetic approach to two chalcones

L32  ANSWER 4 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Study on chemical constituents of Vitex leptobotrys. II. Chalcones and
     alkaloid

L32  ANSWER 5 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Chalcones and ecdysteroids from Vitex leptobotrys

L32  ANSWER 6 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Constitution and synthesis of gnaphalin - a new chalcone glucoside from
     Gnaphalium multiceps Wall

L32  ANSWER 7 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   New chalcone glucoside from Gnaphalium multiceps

L32  ANSWER 8 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   A new effect of hydrogen bond formation. Chelation and stability of
     flavanones

L32  ANSWER 9 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Constitution of naringin. The position of the sugar group


=> d l32 4 5 6 7 ti abs bib

L32  ANSWER 4 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Study on chemical constituents of Vitex leptobotrys. II. Chalcones and
     alkaloid
AB   In previous paper we have reported on the isolation and structural
     elucidation of seven ecdysteroids from the aerial part of hitherto
     non-investigated species Vitex leptobotrys growing in North Vietnam.  Now
     we describe the isolation of three novel chalcones named
     2',4'-dihydroxy-4,6'-dimethoxychalcone, 4'-hydroxy-4,2',6'-
     trimethoxychalcone, 4,2',4',β-tetrahydroxy-6-methoxy-α,β-
     dihydrochalcone besides the know chalcones and the alkaloid
     N-trans-feruloyltyramine from this plant.  Their structures have been
     assigned by the spectral methods and especially by 2D-NMR spectroscopy.
AN   2000:703682  CAPLUS
DN   134:97876
TI   Study on chemical constituents of Vitex leptobotrys. II. Chalcones and
     alkaloid
AU   Thuy, Trinh Thi; Sung, Tran Van; Adam, Guenter
CS   Inst. Chemistry, National Center for Natural Sci. and Tech. of Vietnam, Ha
     Noi, Vietnam
SO   Tap Chi Hoa Hoc (2000), 38(2), 1-7
     CODEN: TCHHDC; ISSN: 0378-2336
PB   Toa Soan Tap Chi Hoa Hoc
DT   Journal
LA   Vietnamese
```

L32 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN
TI Chalcones and ecdysteroids from Vitex leptobotrys
AB In addition to some known chalcones and ecdysteroids three new chalcones were isolated from aerial parts of Vitex leptobotrys. The structures of the new chalcones were identified as 2',4'-dihydroxy-4,6'-dimethoxychalcone, 4'-hydroxy-4,2',6'-trimethoxychalcone and 2',4,4',β-tetrahydroxy-6'-methoxy-α,β-dihydrochalcone.
AN 1999:37803 CAPLUS
DN 130:165551
TI Chalcones and ecdysteroids from Vitex leptobotrys
AU Thuy, Trinh Thi; Porzel, Andrea; Ripperger, Helmut; Van Sung, Tran; Adam, Gunter
CS Institute of Chemistry, National Center for Natural Science and Technology of Vietnam, Hanoi, Vietnam
SO Phytochemistry (1998), 49(8), 2603-2605
CODEN: PYTCAS; ISSN: 0031-9422
PB Elsevier Science Ltd.
DT Journal
LA English
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN
TI Constitution and synthesis of gnaphalin - a new chalcone glucoside from Gnaphalium multiceps Wall
GI For diagram(s), see printed CA Issue.
AB Glucosidation of 6-O-methylphloracetophenone (I) yields 2-hydroxy-4-glucosyloxy-6-O-methylacetophenone, which on chalcone condensation with 4-hydroxybenzaldehyde in alkaline medium affords gnaphalin (II), a new chalcone glucoside from G. multiceps. Methylation of II and subsequent acid hydrolysis gives 4'-hydroxy-4,2',6'-trimethoxychalcone (III). I on tosylation with 4-MeC6H4SO2Cl, followed by methylation with Me2SO4 with subsequent detosylation yields 2,6-di-O-methylphloracetophenone (IV). Condensation of IV with anisaldehyde in alkaline medium gave III.
AN 1977:73053 CAPLUS
DN 86:73053
TI Constitution and synthesis of gnaphalin - a new chalcone glucoside from Gnaphalium multiceps Wall
AU Ahluwalia, V. K.; Rani, Nimmi
CS Dep. Chem., Univ. Delhi, Delhi, India
SO Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1976), 14B(8), 594-5
CODEN: IJSBDB; ISSN: 0376-4699
DT Journal
LA English

L32 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN
TI New chalcone glucoside from Gnaphalium multiceps
GI For diagram(s), see printed CA Issue.
AB A new chalcone glucoside from G. multiceps was isolated and its structure elucidated as 2',4,4'-trihydroxy-6'-methoxychalcone 4'-glucoside(I).
AN 1974:435544 CAPLUS
DN 81:35544
TI New chalcone glucoside from Gnaphalium multiceps
AU Maruyama, Masao; Hayasaka, Kyoko; Sasaki, Shinichi; Hosokawa, Shinzuo; Uchiyama, Hiroko
CS Dep. Chem., Miyagi Univ. Educ., Sendai, Japan
SO Phytochemistry (Elsevier) (1974), 13(1), 286-8
CODEN: PYTCAS; ISSN: 0031-9422
DT Journal
LA English

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=> s (vitex(w)leptobotrys) or (gnaphalium(w)multiceps)
           642 VITEX
             5 LEPTOBOTRYS
             4 VITEX(W)LEPTOBOTRYS
           189 GNAPHALIUM
            63 MULTICEPS
             5 GNAPHALIUM(W)MULTICEPS
L33          9 (VITEX(W)LEPTOBOTRYS) OR (GNAPHALIUM(W)MULTICEPS)

=> s l33 and cancer
        289095 CANCER
L34          0 L33 AND CANCER

=> s l33 and carcin?
        247327 CARCIN?
L35          0 L33 AND CARCIN?

=> d l33 1-9 ti

L33  ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   A facile synthetic approach to two chalcones

L33  ANSWER 2 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Study on chemical constituents of Vitex leptobotrys.
     II. Chalcones and alkaloid

L33  ANSWER 3 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Study on chemical constituents of Vitex leptobotrys.
     I. The ecdysteroids

L33  ANSWER 4 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Chalcones and ecdysteroids from Vitex leptobotrys

L33  ANSWER 5 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Study on the chemical constituents of volatile oils by capillary GC/MS and
     GC/FTIR

L33  ANSWER 6 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Survey on the content of cadmium, copper, lead and zinc in edible herbs in
     Korea

L33  ANSWER 7 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Constitution and synthesis of gnaphalin - a new chalcone glucoside from
     Gnaphalium multiceps Wall

L33  ANSWER 8 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   New chalcone glucoside from Gnaphalium multiceps

L33  ANSWER 9 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Flower oil of Gnaphalium multiceps


=> s l31
L36          1 L31

=> d l36 ti abs bib

L36  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2006 ACS on STN
TI   Chalcone and flavone compounds for the treatment of bladder and urinary
     tract cancers
AB   The invention discloses compns. of matter and methods wherein chalcone and
     flavone derivs. are administered to human or veterinary patients for the
     treatment of bladder or urinary tract cancer.  Compds. of the invention
```

include 2'-hydroxy-4,4',6'-trimethoxychalcone (Flavokawain A).
AN 2004:1127078 CAPLUS
DN 142:49211
TI Chalcone and flavone compounds for the treatment of bladder and urinary tract cancers
IN Zi, Xiolin; Simoneau, Anne R.
PA The Regents of the University of California, USA
SO U.S. Pat. Appl. Publ., 14 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004259813	A1	20041223	US 2004-817449	20040401
PRAI US 2003-459495P	P	20030401		

OS MARPAT 142:49211

=> d his

(FILE 'HOME' ENTERED AT 18:06:07 ON 28 AUG 2006)

FILE 'EMBASE, MEDLINE, BIOSIS' ENTERED AT 18:06:27 ON 28 AUG 2006
L1 97 S KAVA AND CANCER
L2 79 DUP REM L1 (18 DUPLICATES REMOVED)
L3 36 S L2 NOT PY>2003
L4 22 S L2 NOT PY>2002
L5 0 S L4 AND BLADDER
L6 4 S L2 AND BLADDER
L7 29 S (HOP OR HOPS OR BEER) AND (BLADDER CANCER)
L8 14 DUP REM L7 (15 DUPLICATES REMOVED)
L9 11 S L8 NOT PY>2003
L10 0 S (HOP OR HOPS) AND (BLADDER CANCER)
L11 224 S (HOP OR HOPS) AND (CANCER)
L12 1 S L11 AND BLADDER
L13 15 S L11 AND URINARY
L14 7 DUP REM L13 (8 DUPLICATES REMOVED)
L15 5 S L14 NOT PY>2003
L16 111 S L11 NOT PY>2002
L17 64 DUP REM L16 (47 DUPLICATES REMOVED)
L18 64 S (HUMULUS(W)LUPULUS) AND CANCER
L19 43 DUP REM L18 (21 DUPLICATES REMOVED)
L20 0 S L19 AND (BLADDER OR URINARY)
L21 14 S L19 NOT PY>2002

FILE 'CAPLUS' ENTERED AT 18:25:32 ON 28 AUG 2006
L22 38 S (HUMULUS(W)LUPULUS) AND CANCER
L23 1 S L22 AND (BLADDER OR URINARY)
L24 13 S L22 NOT PY>2003
L25 429 S PIPER(W)METHYSTICUM
L26 8 S L25 AND CANCER

FILE 'REGISTRY' ENTERED AT 18:30:13 ON 28 AUG 2006
L27 STRUCTURE UPLOADED
L28 0 S L27 FAM SAM
L29 2 S L27 FAM FULL
L30 STRUCTURE UPLOADED
L31 1 S L30 FAM FULL

FILE 'CAPLUS' ENTERED AT 18:32:14 ON 28 AUG 2006
L32 9 S L29
L33 9 S (VITEX(W)LEPTOBOTRYS) OR (GNAPHALIUM(W)MULTICEPS)
L34 0 S L33 AND CANCER

L35	0	S L33 AND CARCIN?
L36	1	S L31

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=>
=> d his

     (FILE 'HOME' ENTERED AT 14:48:44 ON 29 AUG 2006)

     FILE 'CAPLUS' ENTERED AT 14:49:01 ON 29 AUG 2006
L1             1 S US6303157/PN
               SELECT L1 1 RN
L2         14388 S E1-E2

     FILE 'REGISTRY' ENTERED AT 14:51:46 ON 29 AUG 2006
               E FLAVOKAWAIN/CN
L3             5 S E4-E10

     FILE 'CAPLUS' ENTERED AT 14:53:38 ON 29 AUG 2006
L4           115 S L3 OR (FLAVOKAVIN OR FLAVOKAWAIN OR FLAVOKAWINE OR FLAVOKAWIN
L5             2 S L4(L)(CANCER# OR TUMOR# OR CARCINO? OR NEOPLAS?)

     FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 14:58:27 ON 29 AUG 2006
L6             5 S L5

     FILE 'EPFULL, FRFULL, GBFULL, PATDPAFULL, PCTFULL, RDISCLOSURE,
     USPATFULL, USPAT2' ENTERED AT 15:01:21 ON 29 AUG 2006
L7             3 S L6
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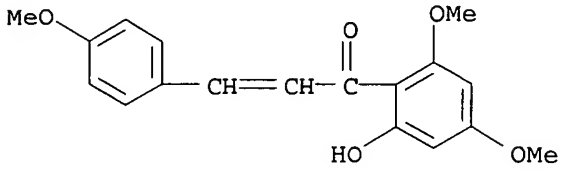
=> d rn str cn 1-5

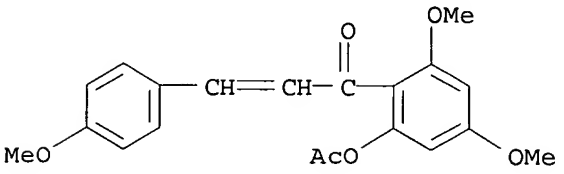
L3 ANSWER 1 OF 5 REGISTRY COPYRIGHT 2006 ACS on STN
RN 64680-84-8 REGISTRY



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

CN 2-Propen-1-one, 1-(2-hydroxy-4,6-dimethoxyphenyl)-3-(4-methoxyphenyl)-
(9CI) (CA INDEX NAME)
OTHER NAMES:
CN Flavokavin A
CN Flavokawain A

L3 ANSWER 2 OF 5 REGISTRY COPYRIGHT 2006 ACS on STN
RN 51254-82-1 REGISTRY

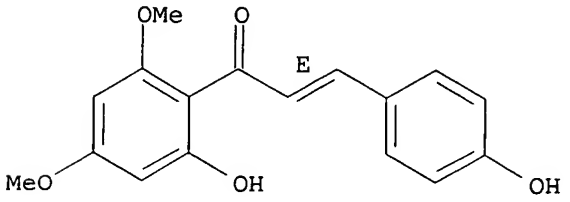


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

CN 2-Propen-1-one, 1-[2-(acetyloxy)-4,6-dimethoxyphenyl]-3-(4-methoxyphenyl)-
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Chalcone, 2'-hydroxy-4,4',6'-trimethoxy-, acetate (6CI, 7CI)
OTHER NAMES:
CN 2'-Acetoxy-4,4',6'-trimethoxychalcone
CN 2'-Acetyloxy-4,4',6'-trimethoxychalcone
CN Flavokawain A, acetate

L3 ANSWER 3 OF 5 REGISTRY COPYRIGHT 2006 ACS on STN
RN 37308-75-1 REGISTRY

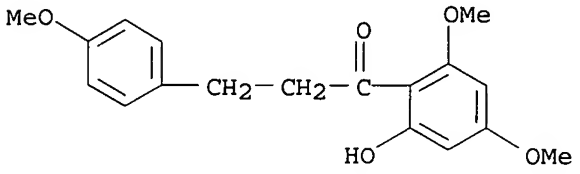
Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

CN 2-Propen-1-one, 1-(2-hydroxy-4,6-dimethoxyphenyl)-3-(4-hydroxyphenyl)-, (2E)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propen-1-one, 1-(2-hydroxy-4,6-dimethoxyphenyl)-3-(4-hydroxyphenyl)-, (E)-
OTHER NAMES:
CN 2',4-Dihydroxy-4',6'-dimethoxy-trans-chalcone
CN Flavokavin C
CN Flavokawain C

L3 ANSWER 4 OF 5 REGISTRY COPYRIGHT 2006 ACS on STN
RN 3791-75-1 REGISTRY

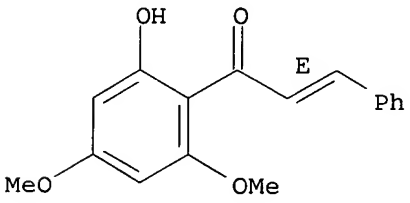


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

CN 1-Propanone, 1-(2-hydroxy-4,6-dimethoxyphenyl)-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Propiophenone, 2'-hydroxy-4',6'-dimethoxy-3-(p-methoxyphenyl)- (6CI, 7CI, 8CI)
OTHER NAMES:
CN Asebogenin dimethyl ether
CN Flavokawin A
CN Flavokawin A, dihydro-
CN Flavokawine A
CN NSC 112156

L3 ANSWER 5 OF 5 REGISTRY COPYRIGHT 2006 ACS on STN
RN 1775-97-9 REGISTRY

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

CN 2-Propen-1-one, 1-(2-hydroxy-4,6-dimethoxyphenyl)-3-phenyl-, (2E)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propen-1-one, 1-(2-hydroxy-4,6-dimethoxyphenyl)-3-phenyl-, (E)-
CN Chalcone, 2'-hydroxy-4',6'-dimethoxy- (6CI, 7CI, 8CI)
OTHER NAMES:
CN (E)-2'-Hydroxy-4',6'-dimethoxychalcone

CN Flavokavin B
CN Flavokawain B

=> FIL CAPLUS
COST IN U.S. DOLLARS SINCE FILE ENTRY 44.14 TOTAL SESSION 52.58
FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 14:53:38 ON 29 AUG 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 29 Aug 2006 VOL 145 ISS 10
FILE LAST UPDATED: 28 Aug 2006 (20060828/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/infopolicy.html

```
=> s l3 or (Flavokavin or Flavokawain or Flavokawine or Flavokawin)(w)(a or b or c)
           113 L3
             4 FLAVOKAVIN
             1 FLAVOKAVINS
             4 FLAVOKAVIN
                 (FLAVOKAVIN OR FLAVOKAVINS)
            18 FLAVOKAWAIN
             4 FLAVOKAWAINS
            19 FLAVOKAWAIN
                 (FLAVOKAWAIN OR FLAVOKAWAINS)
             0 FLAVOKAWINE
            11 FLAVOKAWIN
      20076720 A
       1614648 B
       3502422 C
            30 (FLAVOKAVIN OR FLAVOKAWAIN OR FLAVOKAWINE OR FLAVOKAWIN)(W)(A
               OR B OR C)
L4          115 L3 OR (FLAVOKAVIN OR FLAVOKAWAIN OR FLAVOKAWINE OR FLAVOKAWIN)(W
               )(A OR B OR C)

=> s l4(l)(cancer# or tumor# or carcino? or neoplas?)
        300247 CANCER#
        428680 TUMOR#
        246132 CARCINO?
        460821 NEOPLAS?
L5           2 L4(L)(CANCER# OR TUMOR# OR CARCINO? OR NEOPLAS?)

=> d ibib abs 1-2

L5   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2006 ACS on STN
```

ACCESSION NUMBER: 2005:328854 CAPLUS
DOCUMENT NUMBER: 142:475540
TITLE: Flavokawain A, a Novel Chalcone from Kava Extract, Induces Apoptosis in Bladder Cancer Cells by Involvement of Bax Protein-Dependent and Mitochondria-Dependent Apoptotic Pathway and Suppresses Tumor Growth in Mice
AUTHOR(S): Zi, Xiaolin; Simoneau, Anne R.
CORPORATE SOURCE: Department of Urology and Chao Family Comprehensive Cancer Center, University of California, Irvine, Orange, CA, USA
SOURCE: Cancer Research (2005), 65(8), 3479-3486
CODEN: CNREA8; ISSN: 0008-5472
PUBLISHER: American Association for Cancer Research
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Consumption of the traditional kava preparation was reported to correlate with low and uncustomary gender ratios (more cancer in women than men) of cancer incidences in three kava-drinking countries: Fiji, Vanuatu, and Western Samoa. We have identified flavokawain A, B, and C but not the major kavalactone, kawain, in kava exts. as causing strong antiproliferative and apoptotic effect in human bladder cancer cells. Flavokawain A results in a significant loss of mitochondrial membrane potential and release of cytochrome c into the cytosol in an invasive bladder cancer cell line T24. These effects of flavokawain A are accompanied by a time-dependent decrease in Bcl-xL, a decrease in the association of Bcl-xL to Bax, and an increase in the active form of Bax protein. Using the primary mouse embryo fibroblasts Bax knockout and wild-type cells as well as a Bax inhibitor peptide derived from the Bax-binding domain of Ku70, we showed that Bax protein was, at least in part, required for the apoptotic effect of flavokawain A . In addition, flavokawain A down-regulates the expression of X-linked inhibitor of apoptosis and survivin. Because both X-linked inhibitor of apoptosis and survivin are main factors for apoptosis resistance and are overexpressed in bladder tumors, our data suggest that flavokawain A may have a dual efficacy in induction of apoptosis preferentially in bladder tumors. Finally, the anticarcinogenic effect of flavokawain A was evident in its inhibitory growth of bladder tumor cells in a nude mice model (57% of inhibition) and in soft agar.

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 2 CAPLUS
ACCESSION NUMBER: 2004:1127078 CAPLUS
DOCUMENT NUMBER: 142:49211
TITLE: Chalcone and flavone compounds for the treatment of bladder and urinary tract cancers
INVENTOR(S): Zi, Xiolin; Simoneau, Anne R.
PATENT ASSIGNEE(S): The Regents of the University of California, USA
SOURCE: U.S. Pat. Appl. Publ., 14 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004259813	A1	20041223	US 2004-817449		20040401
PRIORITY APPLN. INFO.:			US 2003-459495P	P	20030401

OTHER SOURCE(S): MARPAT 142:49211

AB The invention discloses compns. of matter and methods wherein chalcone and flavone derivs. are administered to human or veterinary patients for the treatment of bladder or urinary tract cancer. Compds. of the invention include 2'-hydroxy-4,4',6'-trimethoxychalcone (Flavokawain A).

L6 ANSWER 1 OF 5 MEDLINE on STN
ACCESSION NUMBER: 2005199670 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15833884
TITLE: Flavokawain A, a novel chalcone from kava extract, induces apoptosis in bladder cancer cells by involvement of Bax protein-dependent and mitochondria-dependent apoptotic pathway and suppresses tumor growth in mice.
AUTHOR: Zi Xiaolin; Simoneau Anne R
CORPORATE SOURCE: Department of Urology and Chao Family Comprehensive Cancer Center, University of California, Irvine, Orange, CA 92868, USA.. xzi@uci.edu
CONTRACT NUMBER: CA-109428 (NCI)
SOURCE: Cancer research, (2005 Apr 15) Vol. 65, No. 8, pp. 3479-86. Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200506
ENTRY DATE: Entered STN: 19 Apr 2005
Last Updated on STN: 4 Jun 2005
Entered Medline: 3 Jun 2005

AB Consumption of the traditional kava preparation was reported to correlate with low and uncustomary gender ratios (more cancer in women than men) of cancer incidences in three kava-drinking countries: Fiji, Vanuatu, and Western Samoa. We have identified flavokawain A, B, and C but not the major kavalactone, kawain, in kava extracts as causing strong antiproliferative and apoptotic effect in human bladder cancer cells. Flavokawain A results in a significant loss of mitochondrial membrane potential and release of cytochrome c into the cytosol in an invasive bladder cancer cell line T24. These effects of flavokawain A are accompanied by a time-dependent decrease in Bcl-x(L), a decrease in the association of Bcl-x(L) to Bax, and an increase in the active form of Bax protein. Using the primary mouse embryo fibroblasts Bax knockout and wild-type cells as well as a Bax inhibitor peptide derived from the Bax-binding domain of Ku70, we showed that Bax protein was, at least in part, required for the apoptotic effect of flavokawain A . In addition, flavokawain A down-regulates the expression of X-linked inhibitor of apoptosis and survivin. Because both X-linked inhibitor of apoptosis and survivin are main factors for apoptosis resistance and are overexpressed in bladder tumors, our data suggest that flavokawain A may have a dual efficacy in induction of apoptosis preferentially in bladder tumors. Finally, the anticarcinogenic effect of flavokawain A was evident in its inhibitory growth of bladder tumor cells in a nude mice model (57% of inhibition) and in soft agar.

L6 ANSWER 2 OF 5 EMBASE
ACCESSION NUMBER: 2005175830 EMBASE
TITLE: Flavokawain A, a novel chalcone from kava extract, induces apoptosis in bladder cancer cells by involvement of Bax protein-dependent and mitochondria-dependent apoptotic pathway and tumor growth in mice.
AUTHOR: Zi X.; Simoneau A.R.
CORPORATE SOURCE: X. Zi, Chao Fam. Compreh. Cancer Center, University of California, Irvine, Building 23, 101 The City Drive South, Route 81, Orange, CA 92868, United States. xzi@uci.edu

SOURCE: Cancer Research, (15 Apr 2005) Vol. 65, No. 8, pp. 3479-3486. .
Refs: 50
ISSN: 0008-5472 CODEN: CNREA8
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
030 Pharmacology
037 Drug Literature Index
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19 May 2005
Last Updated on STN: 19 May 2005

AB Consumption of the traditional kava preparation was reported to correlate with low and uncustomary gender ratios (more cancer in women than men) of cancer incidences in three kava-drinking countries: Fiji, Vanuatu, and Western Samoa. We have identified flavokawain A, B, and C but not the major kavalactoee, kawain, in kava extracts as causing strong antiproliferative and apoptotic effect in human bladder cancer cells. Flavokawain A results in a significant loss of mitochondrial membrane potential and release of cytochrome c into the cytosol in an invasive bladder cancer cell line T24. These effects of flavokawain A are accompanied by a time-dependent decrease in Bcl-x(L), a decrease in the association of Bcl-x(L) to Bax, and an increase in the active form of Bax protein. Using the primary mouse embryo fibroblasts Bax knockout and wild-type cells as well as a Bax inhibitor peptide derived from the Bax-binding domain of Ku70, we showed that Bax protein was, at least in part, required for the apoptotic effect of flavokawain A . In addition, flavokawain A down-regulates the expression of X-linked inhibitor of apoptosis and survivin. Because both X-linked inhibitor of apoptosis and survivin are main factors for apoptosis resistance and are overexpressed in bladder tumors, our data suggest that flavokawain A may have a dual efficacy in induction of apoptosis preferentially in bladder tumors. Finally, the anticarcinogenic effect of flavokawain A was evident in its inhibitory growth of bladder tumor cells in a nude mice model (57% of inhibition) and in soft agar. .COPYRGT.2005 American Association for Cancer Research.

L6 ANSWER 3 OF 5 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:266926 BIOSIS
DOCUMENT NUMBER: PREV200510053758
TITLE: Flavokawain A, a novel chalcone from kava extract, induces apoptosis in bladder cancer cells by involvement of Bax protein-dependent and mitochondria-dependent apoptotic pathway and suppresses tumor growth in mice.
AUTHOR(S): Zi, Xiaolin [Reprint Author]; Simoneau, Anne R.
CORPORATE SOURCE: Univ Calif Irvine, Chao Family Comprehens Canc Ctr, 1-1 City Dr S,Route 81,Bldg 23,Room 431, Orange, CA 92868 USA
xzi@uci.edu
SOURCE: Cancer Research, (APR 15 2005) Vol. 65, No. 8, pp. 3479-3486.
CODEN: CNREA8. ISSN: 0008-5472.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 21 Jul 2005
Last Updated on STN: 21 Jul 2005

AB Consumption of the traditional kava preparation was reported to correlate with low and uncustomary gender ratios (more cancer in women

than men) of cancer incidences in three kava-drinking countries: Fiji, Vanuatu, and Western Samoa. We have identified flavokawain A, B, and C but not the major kavalactone, kawain, in kava extracts as causing strong antiproliferative and apoptotic effect in human bladder cancer cells. Flavokawain A results in a significant loss of mitochondrial membrane potential and release of cytochrome c into the cytosol in an invasive bladder cancer cell line T24. These effects of flavokawain A are accompanied by a time-dependent decrease in Bcl-xL, a decrease in the association of Bcl-x(L), to Bax, and an increase in the active form of Bax protein. Using the primary mouse embryo fibroblasts Bax knockout and wild-type cells as well as a Bax inhibitor peptide derived from the Bax-binding domain of Ku70, we showed that Bax protein was, at least in part, required for the apoptotic effect of flavokawain A . In addition, flavokawain A down-regulates the expression of X-linked inhibitor of apoptosis and survivin. Because both X-linked inhibitor of apoptosis and survivin are main factors for apoptosis resistance and are overexpressed in bladder tumors, our data suggest that flavokawain A may have a dual efficacy in induction of apoptosis preferentially in bladder tumors. Finally, the anticarcinogenic effect of flavokawain A was evident in its inhibitory growth of bladder tumor cells in a nude mice model (57% of inhibition) and in soft agar.

L6 ANSWER 4 OF 5 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:81252 BIOSIS
DOCUMENT NUMBER: PREV200400077576
TITLE: Flavokawain A promotes microtubule polymerization in bladder cancer T24 cells, and is accompanied by G2M arrest, elevated cyclin B1 expression and CDK1 kinase activity.
AUTHOR(S): Simoneau, Anne R. [Reprint Author]; Cen, Dazhi; Hou, Fang-Yao Stephen; Zi, Xiaolin [Reprint Author]
CORPORATE SOURCE: Department of Urology and Chao Family Comprehensive Cancer Center, Orange, CA, USA
SOURCE: Cancer Epidemiology Biomarkers & Prevention, (November 2003) Vol. 12, No. 11 Part 2, pp. 1321s. print.
Meeting Info.: Second Annual AACR International Conference on Frontiers in Cancer Prevention Research : Genetics, Risk Modeling, Molecular Targets for Chemoprevention, Clinical Prevention Trials, Behavioral Prevention Research, Science and Public Policy. Phoenix, Arizona, USA. October 26-30, 2003.
ISSN: 1055-9965 (ISSN print).
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 4 Feb 2004
Last Updated on STN: 4 Feb 2004

L6 ANSWER 5 OF 5 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:451945 BIOSIS
DOCUMENT NUMBER: PREV200300451945
TITLE: Induction of apoptosis in bladder cancer cells by a novel flavonoid, Flavokawain A, in kava extract involves bcl2, BAX and inhibitors of apoptosis protein.
AUTHOR(S): Zi, Xiaolin [Reprint Author]; Simoneau, Anne [Reprint Author]
CORPORATE SOURCE: University of California, Irvine, Orange, CA, USA
SOURCE: Proceedings of the American Association for Cancer Research Annual Meeting, (July 2003) Vol. 44, pp. 534. print.

Meeting Info.: 94th Annual Meeting of the American Association for Cancer Research. Washington, DC, USA. July 11-14, 2003.
ISSN: 0197-016X.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 1 Oct 2003
Last Updated on STN: 1 Oct 2003

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L7 ANSWER 1 OF 3 PCTFULL COPYRIGHT 2006 Univentio on STN
ACCESSION NUMBER: 2002091966 PCTFULL ED 20021210 EW 200247
TITLE (ENGLISH): KAVALACTONE COMPOSITIONS AND METHODS OF USE
TITLE (FRENCH): COMPOSITIONS DE KAVALACTONE ET LEURS METHODES D'UTILISATION
INVENTOR(S): MCCLEARY, Joel, Roland Farm, 4550 Busthead Road, The Plains, VA 20198, US [US, US];
SUN, Lijun, 148 Depot Rd., Harvard, MA 01451, US [CN, US];
STAATS, Peter, S., 1629 Providence Road, Towson, MA 22186, US [US, US];
CHEN, Shoujun, 19 Dunster Rd., Bedford, MA 01730, US [CN, US]
PATENT ASSIGNEE(S): KAVA PHARMACEUTICALS, INC., PO Box 2038, Middleburg, VA 20118-2038, US [US, US], for all designates States except US;
MCCLEARY, Joel, Roland Farm, 4550 Busthead Road, The Plains, VA 20198, US [US, US], for US only;
SUN, Lijun, 148 Depot Rd., Harvard, MA 01451, US [CN, US], for US only;
STAATS, Peter, S., 1629 Providence Road, Towson, MA 22186, US [US, US], for US only;
CHEN, Shoujun, 19 Dunster Rd., Bedford, MA 01730, US [CN, US], for US only
AGENT: HSI, Jeffrey, D.$, Fish & Richardson, P.C., 225 Franklin Street, Boston, MA 02110-2804$, US
LANGUAGE OF FILING: English
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2002091966	A1	20021121

DESIGNATED STATES
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
RW (ARIPO): GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
RW (EAPO): AM AZ BY KG KZ MD RU TJ TM
RW (EPO): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
RW (OAPI): BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
APPLICATION INFO.: WO 2002-US14930 A 20020513
PRIORITY INFO.: US 2001-09/853,304 20010511
US 2001-10/010,201 20011130
US 2002-60/351,167 20020122

ABEN This invention relates to methods of using compositions having health enhancing qualities, and more particularly to compositions having kavalactones, as well as use and preparation of the compositions.
ABFR L'invention porte sur des methodes d'utilisation de compositions benefiques pour la sante et en particulier sur des compositions contenant des kavalactones, ainsi que sur leur utilisation et leur preparation.

L7 ANSWER 2 OF 3 PCTFULL COPYRIGHT 2006 Univentio on STN
ACCESSION NUMBER: 1997039355 PCTFULL ED 20020514
TITLE (ENGLISH): PHARMACEUTICAL GRADE BOTANICAL DRUGS

TITLE (FRENCH): MEDICAMENTS BOTANIQUES DE QUALITE PHARMACEUTIQUE
INVENTOR(S): KHWAJA, Tasneem, A.;
FRIEDMAN, Elliot, P.
PATENT ASSIGNEE(S): PHARMAPRINT, INC.;
UNIVERSITY OF SOUTHERN CALIFORNIA;
KHWAJA, Tasneem, A.;
FRIEDMAN, Elliot, P.
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 9739355	A1	19971023

DESIGNATED STATES
W: AL AM AU AZ BA BB BG BR BY CA CN CU CZ EE GE GH HU IL IS JP KG KP KR KZ LC LK LR LT LV MD MG MK MN MX NO NZ PL RO RU SG SI SK TJ TM TR TT UA US UZ VN YU GH KE LS MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
APPLICATION INFO.: WO 1997-US6988 A 19970415
PRIORITY INFO.: US 1996-8/632,273 19960415

ABEN The present invention relates generally to botanical materials and methods for making such materials in medicinally useful and pharmaceutically acceptable forms. More particularly, the present invention relates to the use of compositional and activity fingerprints in the processing of botanical materials to produce drugs which qualify as pharmaceutical grade compositions which are suitable for use in clinical or veterinary settings to treat and/or ameliorate diseases, disorders or conditions.

ABFR Materiaux botaniques et procede de production desdits materiaux sous une forme acceptable sur le plan medical et sur le plan pharmaceutique. Plus particulierement, la presente invention concerne l'utilisation d'empreintes digitales de composition et d'activite dans le traitement de materiaux botaniques pour produire des medicaments qui presentent les caracteristiques requises de compositions de qualite pharmaceutique appropriees pour etre utilisees dans des milieux cliniques ou veterinaires pour traiter et/ou ameliorer les maladies, les troubles et les etats pathologiques.

L7 ANSWER 3 OF 3 USPATFULL on STN
ACCESSION NUMBER: 2004:327988 USPATFULL
TITLE: Treatment of bladder and urinary tract cancers
INVENTOR(S): Zi, Xiolin, Irvine, CA, UNITED STATES
Simoneau, Anne R., Long Beach, CA, UNITED STATES
PATENT ASSIGNEE(S): The Regents of the University of California, Oakland, CA (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2004259813	A1	20041223	
APPLICATION INFO.:	US 2004-817449	A1	20040401	(10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-459495P	20030401 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Robert D. Buyan, Stout, Uxa, Buyan & Mullins, LLP, Suite 300, 4 Venture, Irvine, CA, 92618
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 611
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions of matter and methods wherein chalcone and flavone derivatives are administered to human or veterinary patients for the treatment of bladder or urinary tract cancer. Compounds of the invention include 2'-hydroxy-4,4',6'-trimethoxychalcone (Flavokawain A).